# REGIONS

# REGIONS



#### IT'S EASIER TO UNDERSTAND BY STEPPING BACK TO SEE THE FULL PICTURE

PRESENTS

This starchart shows all the major regions of the galaxy, the principal trade routes, and important

ENDOR



NABOO

THE GALAXY

planets. It contains key data for all of the planets from Star Wars Galaxies: An Empire Divided, the new massively multiplayer online roleplaying game from LucasArts.

THE GALAXY IS FILLED WITH 4000 BILLION STARS, around which critic over a pillion highlight periods. The distance from one side of the along you provided the start when the over 20 million highlighent species. The distance from one side of the along you to the other years oppressionately 100,000 light years, the highest three replaced struking can shrink the whole jummey to a waiter of a few weeks or months, adopteding on

Over many millennia, hyperdrive technology has been the main force drawing the galaxy together. A hyperdrive allows a ship to cross a sector or a region in a few hours or days, and shrinks the journey between one region and another to a matter of days or weeks. Although it is possible to make a hyperspace jump in virtually any direction, most ships tend to travel along established, safe hyperspace routes because of the danger of contact with an uncharted body in hyperspace and the complexity of making

new jump calculations.

Sublight drives are normally used for local journeys. Starships can move
at sublight speeds of revertal thousand kilemetres per second in open
space, allowing them to travel from one planet to another in the same star.

COLONIES

NNER RIM

YAGIDHU

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GARIDA

TALABEA

KUAT (

EXPANSION

TRADE ROUTE KEY

TUND



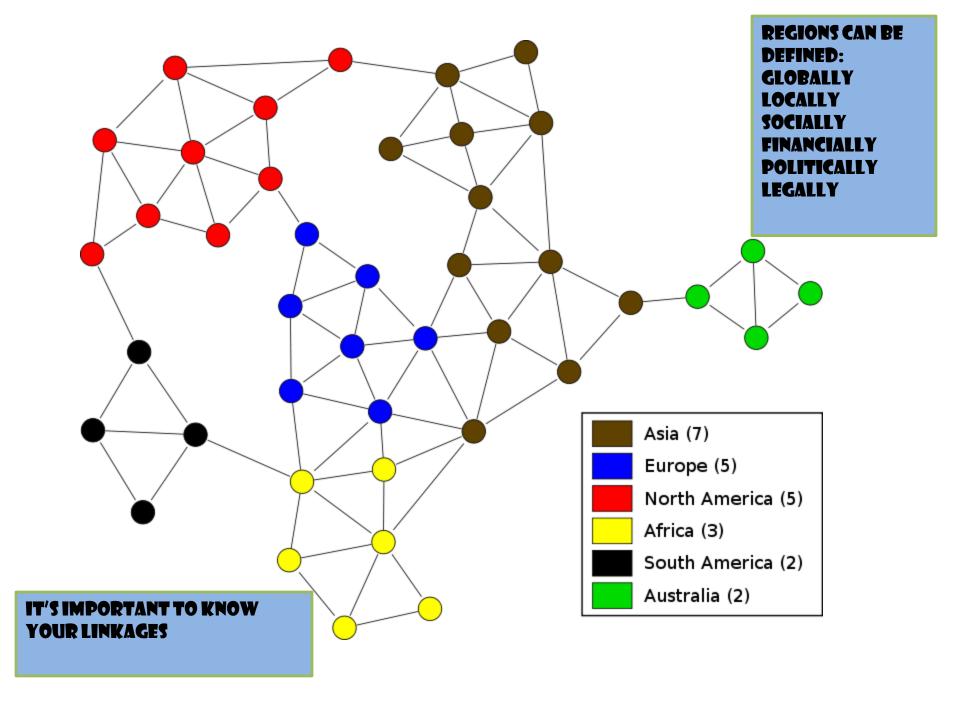


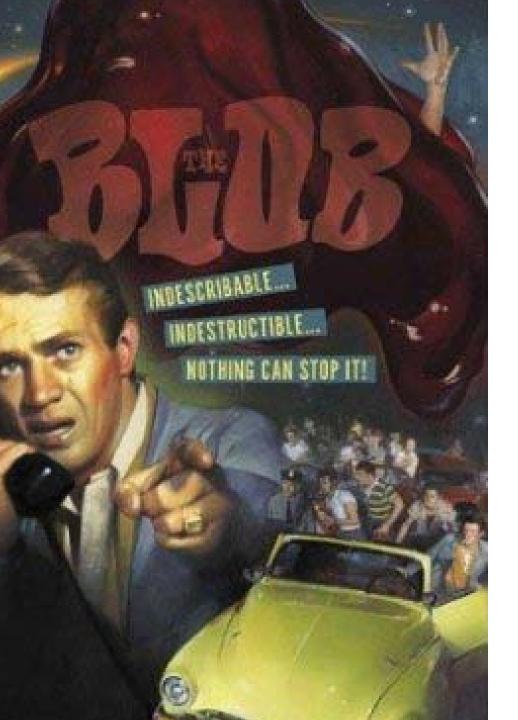












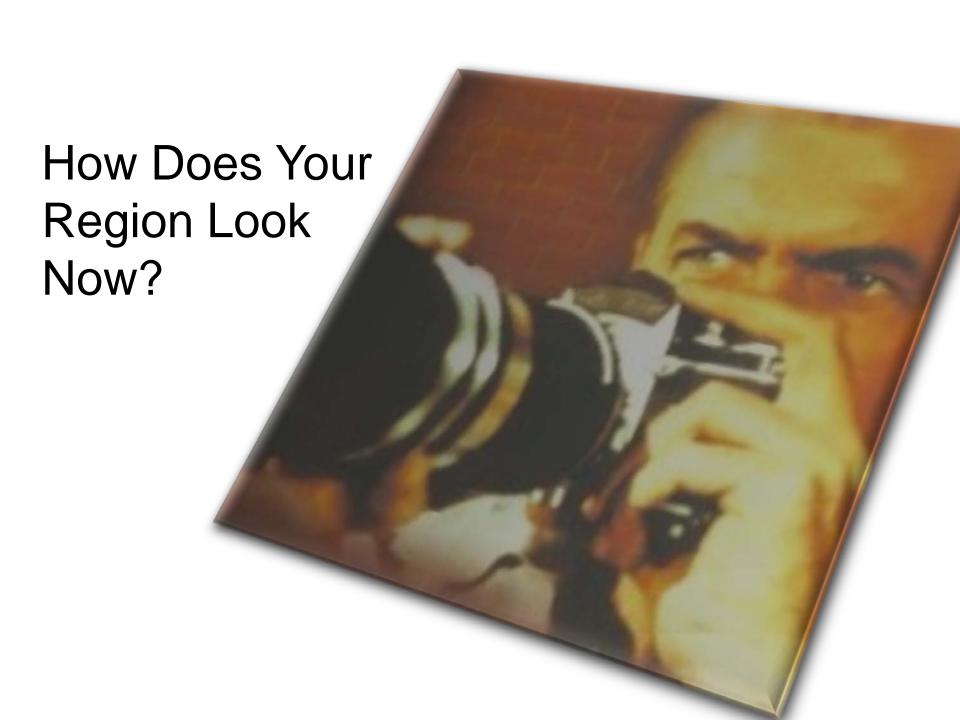
DEFINING YOUR REGIONS FROM YOUR PERSPECTIVE

#### IT'S MESSY

**LOCAL POLITICS SMALL BUSINESSES GLOBAL FIRMS INDUSTRY TARGETS** TRADE FLOWS **COMMUNITY NEEDS** COMMUTING LAYOFFS **REAL ESTATE** RETENTION RECRUITMENT **INCENTIVES** WORKFORCE









Know your industry mix Know your workforce Know your resources

Are You Diversified?

#### Diversification:

Employment is spread more evenly across industries in a region.

Metro Areas tend to have greater diversification than rural areas.

#### Advantages:

Multiple Opportunities for Business Expansion

Regional Economy can still thrive when a single industry declines

Workforce skills are highly transferable within the region



Are You Specialized?

# Specialized Regional Distribution:

A few industries or industry clusters make up the majority of employment in a region.

Rural Areas tend to be more specialized than urban.

#### Advantages:

You know who the players are

Great opportunity for connecting frequently with business leaders

Allows for scenarios to be in place for business expansions or business downturns

Easier to distribute resources

### Where Do You Want to Be?

Or How Do You Avoid This Economic Landscape?



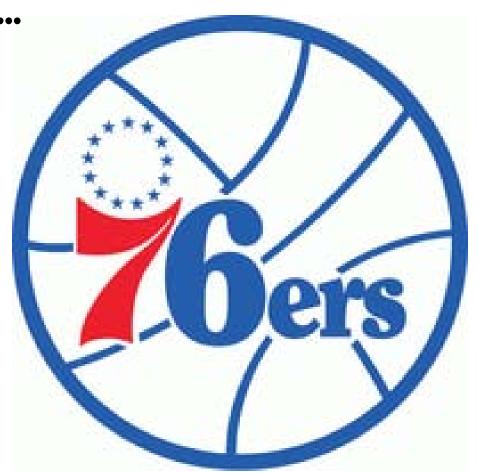


Set Goals

Manage Resources

Who are





#### Where do the Jobs Come from?

76%	Existing Business Expansions	
15%	Business Recruitment/Attraction	
9%	Entrepreneurship	

Source: Blane, Canada Ltd.

#### The Businesses that You Already Have!

```
Cost to attract one job $10,000 - $50,000
Cost to retain one job $200 - $4,000
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Source: U.S. Department of Labor and Employment

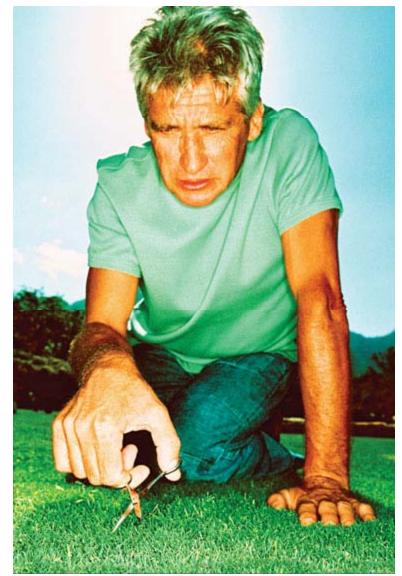


So Where Do You Put Your Money, Time, and Effort?

#### Identifying Your Regional Focus

It's Important to Have The Right Tools for the Job

- Industry Analysis
- Workforce Assessment
- •Employment Projections
- Economic Indicators
- •Emerging Industries
- •Entrepreneurship Studies
- Career Guides
- Specialized Reports





Do we claim to have all the answers?

Of course not.



#### Our Goal Today is to Provide

- •Tools to help with your own regional assessments
- Show you some great regional resources already created

# Regional Data Analysis Techniques





## Outline

- Location Quotients
- Farms and Agribusiness
- Manufacturing
- Retail Trade Analysis
- E-Commerce
- Diversification Index
- Rural vs Urban Industry Patterns





## **Location Quotients**

- Location quotient indicates how concentrated an industry's employment is in a certain area as compared to the U.S. average.
- Location Quotient Formula:

$$LQ = \left(\frac{\text{State Employment}_{\text{INDUSTRY}}}{\text{State Employment}_{\text{TOTAL}}}\right) \div \left(\frac{\text{National Employment}_{\text{INDUSTRY}}}{\text{National Employment}_{\text{TOTAL}}}\right)$$

What Does the Location Quotient (LQ) Mean?			
	<b>Low Employment Growth</b>	<b>High Employment Growth</b>	
High LQ	Important industries that may require attention	Important growth industries	
Low LQ	Industries with lower potential for local economy	Potential emerging industries	

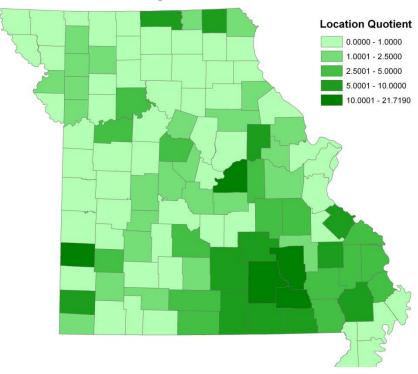
• If an industry has an LQ of 2.0 then it is twice as concentrated in employment as the U.S. average.





## Forest Products Location Quotient

- Location Quotient measures the share of forest products industry's employment in Missouri to its share of total national employment.
- The Location Quotient (LQ) map shows counties with higher concentration in forest product industries than the national average (LQ>1).
- A majority of counties in southeast Missouri are specialized in forest products manufacturing.



Location Quotient Equation (a Ratio of Ratios)

$$\left(\frac{\text{County Employment}_{\text{INDUSTRY}}}{\text{County Employment}_{\text{TOTAL}}}\right) \xrightarrow{\bullet} \left(\frac{\text{National Employment}_{\text{INDUSTRY}}}{\text{National Employment}_{\text{TOTAL}}}\right)$$





# Farms and Agribusiness

- Missouri's Farm & Agribusiness
  - 107,825 farms
  - 298,320 Workers
  - 3,041 Agribusiness firms
- Farm size and agricultural labor on the decline
- Number of farms and market value of production is increasing
- Organic farming acreage expected to double
- Over 52% farms in Missouri have internet access
- Missouri now has twelve ethanol and biodiesel plants in operation

#### Missouri's Contribution to Agriculture

Indicator	Ranking
Number of farms	2 <sup>nd</sup>
Beef cows	2 <sup>nd</sup>
Hay production (excluding alfalfa)	4 <sup>th</sup>
Rice production	4 <sup>th</sup>
Sorghum production	5 <sup>th</sup>
Turkeys raised	5 <sup>th</sup>
Hogs and Pigs	7 <sup>th</sup>
Soybean production	7 <sup>th</sup>
Corn production	8 <sup>th</sup>
Cotton production	9 <sup>th</sup>
Winter wheat production	9 <sup>th</sup>

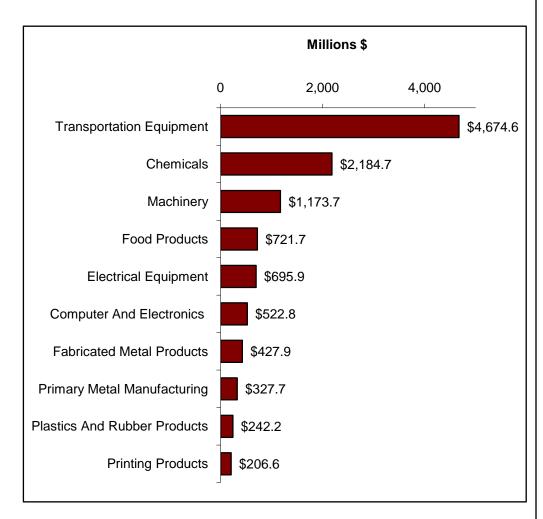
Source: National Agricultural Statistical Service, USDA, 2006





# Manufacturing Sector

- Missouri Manufacturing
  - 302,219 Workers
  - 7,535 Firms
  - Average wage: \$45,376
- Contributes \$32 Billion in Value-Added (15% of GDP) to the State
- Employs over 13% of labor force in Missouri
- Value-Added per worker is \$91,985







## Retail Trade Measures

$$Pull \; Factor_{\text{sector}} = \frac{Retail \; sales_{county}}{Adjusted \; population_{county}} \div \frac{Retail \; sales_{state}}{Adjusted \; population_{state}}$$

 $Trade\ Area\ Capture_{county} = Adjusted\ population_{county} * Pull\ factor_{county}$ 

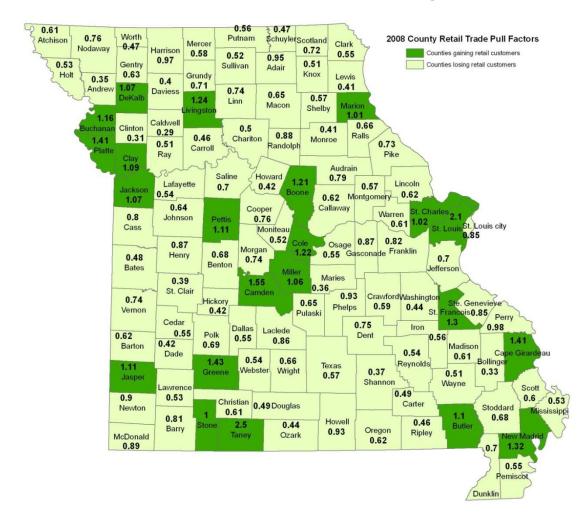
$$Market \ share_{county} = \frac{Trade \ area \ capture_{county}}{Trade \ area \ capture_{state}}$$

$$Buying \ power \ index_{county} = \frac{2*\left(\frac{population_{county}}{population_{state}}\right) + 3*\left(\frac{retail \ sales_{county}}{retail \ sales_{state}}\right) + 5*\left(\frac{per \ capita \ income_{county}}{per \ capita \ income_{state}}\right)}{10 \left(sum \ of \ weights\right)}$$





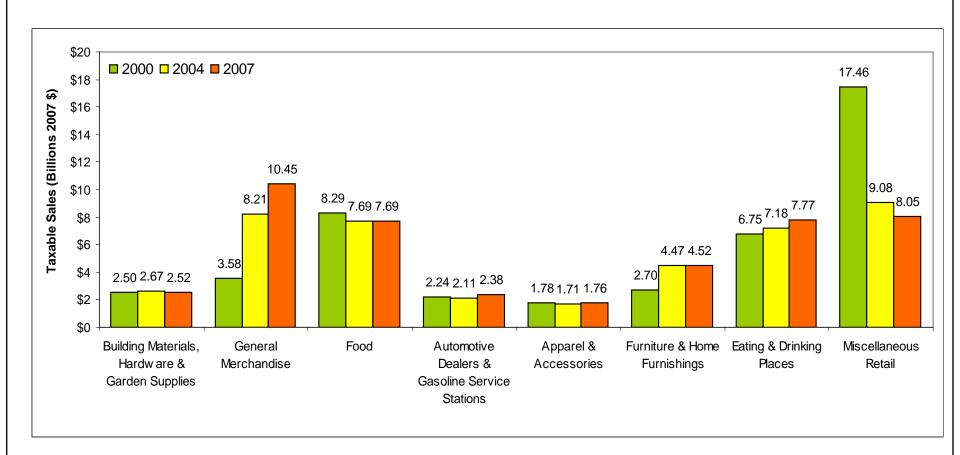
# Missouri Retail Trade Analysis







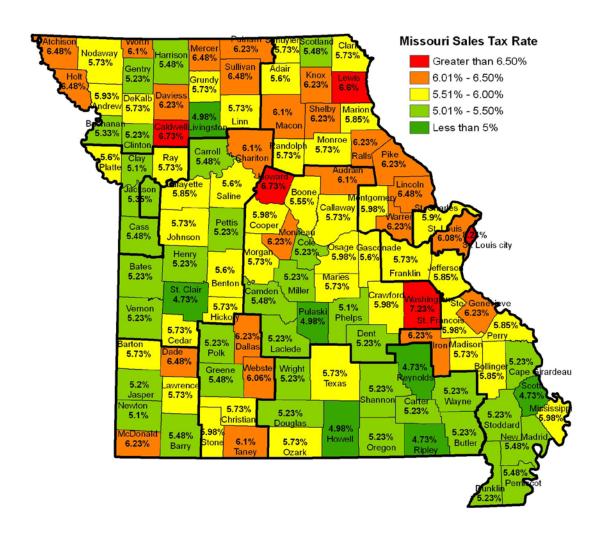
## Retail Sales Trends







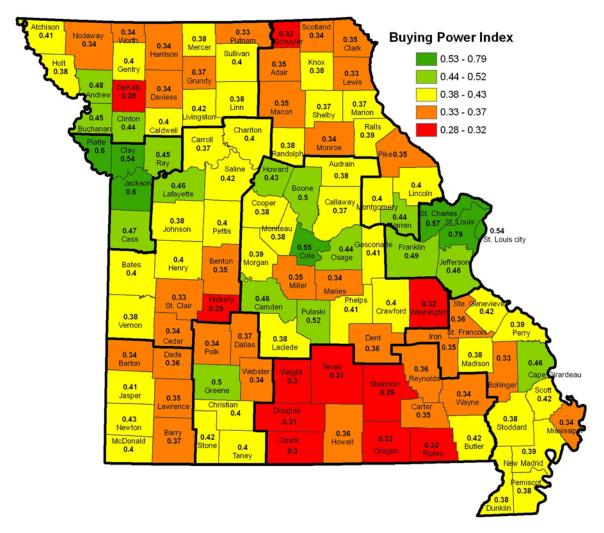
## Missouri Sales Tax Rate







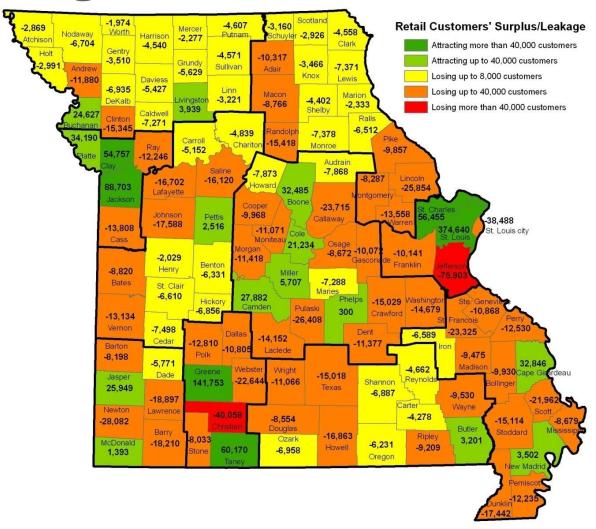
# Buying Power Index







## Commuting Patterns of Retail Customers



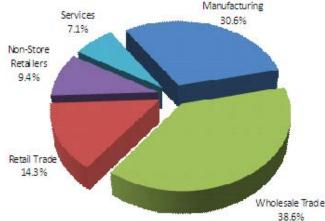


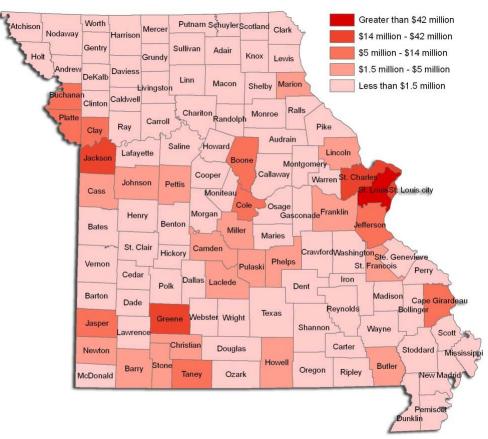


## **E-Commerce Industries**

- E-Commerce Industries
  - 177,209 Workers
  - \$2.4 Billion Sales
  - 6,901 Firms
- Highest wages: Wholesale Trade
- Most workers: Manufacturing

Most firms: Services









### **Diversification Index**

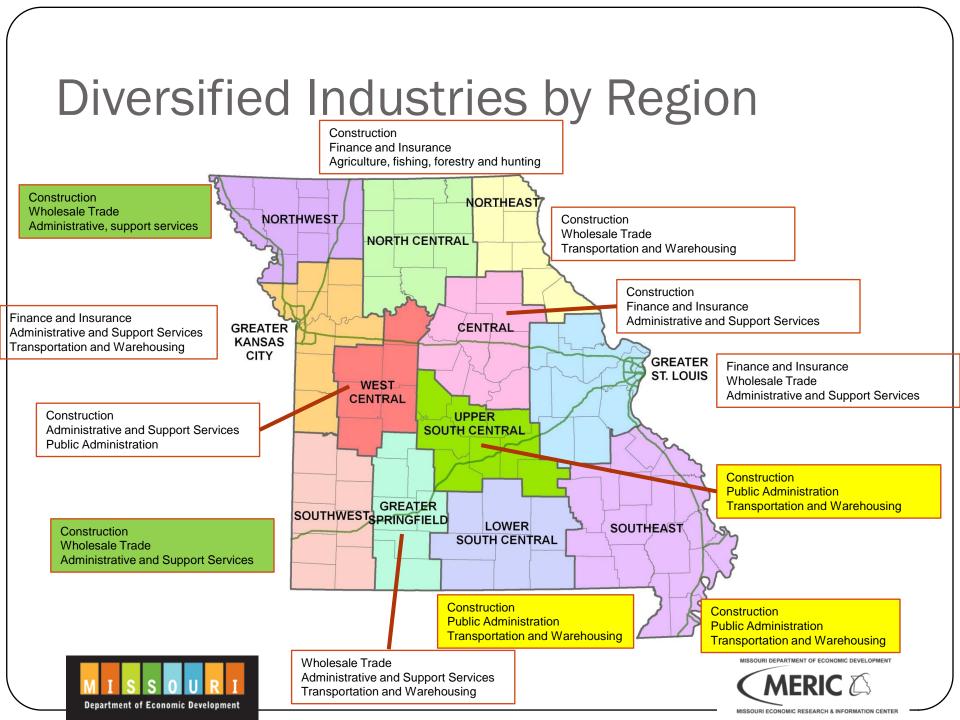
• The industrial diversification index measures the distribution of labor force within the region.

$$Diversification\ Index_{sector} = \sum_{i=1}^{n} \left( \frac{n}{n-1} \left( \frac{Sector\ employment_{county}}{Total\ employment_{county}} \right) - \frac{1}{n} \right)^{2} \right)$$

• The lower the index, the more diversified the region, the higher the index, the more dependent the region.







Dependent Industries by Region Manufacturing Retail Trade Health Care and Social Assistance Manufacturing Manufacturing NORTHEAST Retail Trade Retail Trade NORTHWEST Health Care and Social Assistance Health Care and Social Assistance NORTH CENTRAL **Public Administration** Retail Trade Agriculture, fishing, forestry & hunting Health Care and Social Assistance CENTRAL GREATER Retail Trade KANSAS Health Care and Social Assistance CITY GREATER Manufacturing ST. LOUIS Retail Trade WEST Health Care and Social Assistance CENTRAL Manufacturing UPPER Retail Trade SOUTH CENTRAL Health Care and Social Assistance Accommodation and Food Services Retail Trade Health Care and Social Assistance GREATER Manufacturing SOUTHWESTSPRINGFIELD Retail Trade LOWER SOUTHEAST Health Care and Social Assistance SOUTH CENTRAL Manufacturing Manufacturing Retail Trade Retail Trade Health Care and Social Assistance Health Care and Social Assistance Accommodation and Food Services Retail Trade Health Care and Social Assistance Department of Economic Development

## Industry Pattern Analysis

- Understanding the industry patterns is critical to designing effective development initiatives.
- Two important patterns are analyzed:
  - Spot Strengths of large sector employment, typically in one or two firms
  - Core Clusters of employment across a mix of similar industries.
- Compare two regions Rural (Northeast) and Urban (St. Louis)





## Northeast Region

- Population: 90,231
- Economic Centers:
  - Hannibal, Marion County
  - Louisiana, Pike County
- Employment: 30,882
- Estimated Farm Employment:6,600
- Average Wage: \$28,266
- Health Care, Retail and Manufacturing are primary employers





TYPE	NAICS	INDUSTRY	LQ
Cluster	111	Crop production	2.4
Cluster	112	Animal Production	5.9
Cluster	311	Food manufacturing	1.8
Cluster	331	Primary Metal Mfg.	5.5
Cluster	333	Machinery Mfg.	3.4
Cluster	484	Truck Transportation	1.7
Spot	325	Chemical Mfg.	2.6
Spot	326	Plastics/Rubber Products Mfg.	1.8
Spot	713	Amusements, Gambling, and Rec.	1.9

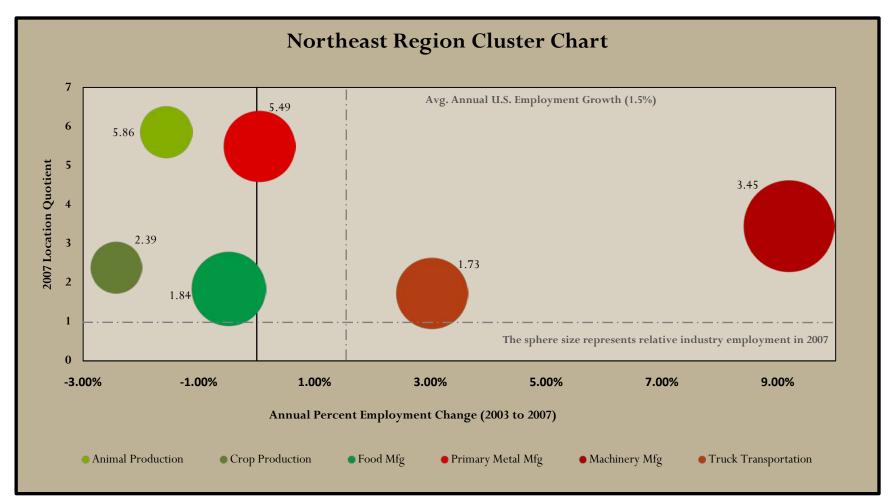
## Northeast Region Industry Clusters

Cluster		Agribusiness		Metal/Mac	hinery Mfg.	Truck Transp.	
Industry	Crop Production	Animal Production	Food Mfg.	Primary Metal Mfg.	Machinery Mfg.	Truck Transp.	
Location Quotient	2.39	5.86	1.84	5.49	3.45	1.73	
Employment	268	272	566	522	851	520	
Avg. Wage	\$21,429	\$22,080	\$45,987	\$39,953	\$32,929	\$31,451	
	Engaged in	Involved in	Transform-	Smelting	Creating end	Provides over-	
	growing crops	the raising of	ation of	and/or	products that	the-road	
	mainly for	mainly for fattening		refining	apply	transport-	
uc	food and	animals for	agricultural	ferrous and	mechanical	ation of cargo	
ptic	fiber, and the sale of includes animals or		goods into	nonferrous	force through	using motor	
Description			products for	metals from	forging,	vehicles, such	
De	farms,	animal	intermediate	ore, pig, or	stamping,	as trucks and	
	orchards,	products.	of final	scrap.	and bending	trailers.	
	groves, etc.		consumption.		processes.		





## Northeast Region Cluster Chart







## Primary Metal Manufacturing

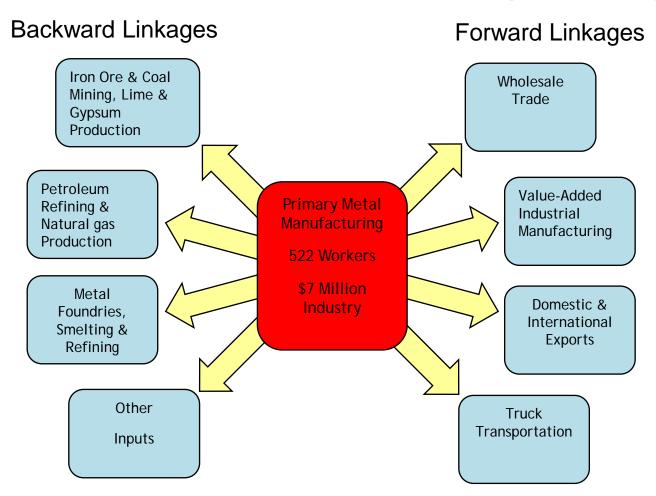
- Primary metal manufacturing consists of ferrous (containing iron) and non-ferrous metal as well as steel production, foundries, iron, steel mills and ferroalloy manufacturing.
- Primary metal manufacturing workers are among the highest paid in the region at \$39,953.
- Value-added per worker is \$66,742.

Primary Metal Manufacturing Impact: Addition of 100 employees							
Direct Impact Indirect Impact Total Impact							
Employment	100	253.8	353.8				
Labor Income*	\$4.0M	\$9.6M	\$13.6M				
Gross Domestic Product	\$7.0M	\$16.6M	\$23.6M				





## Primary Metal Manufacturing Linkages







## Greater St. Louis Region

- Highest Population in the state: 2,201,890 (37% of Missouri)
- Employment: 1,082,997
- Average Wage: \$47,243
- Information services, Research and Development, Chemical manufacturing are primary employers







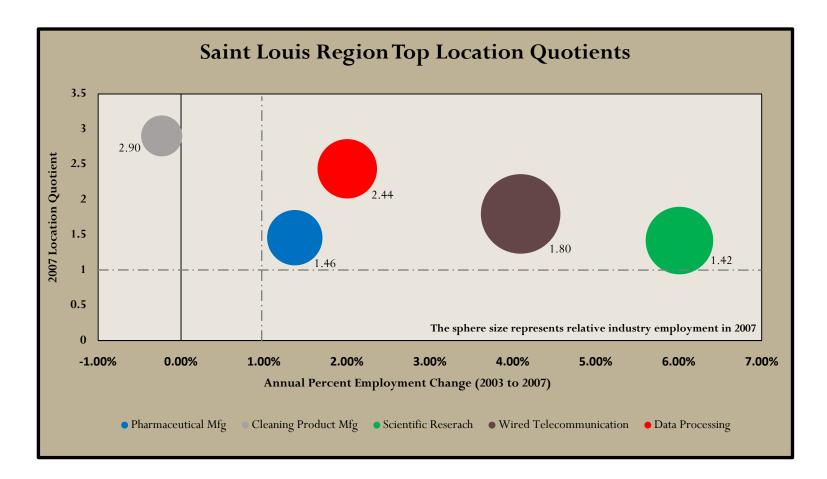
## St. Louis Region Industry Clusters

Туре	NAICS	Industry	LQ	Employment
Super Cluster	5511	Management of companies and enterprises	2.7	42,619
Super Cluster	5417	Scientific research and development services	1.4	7,220
Spot	3251	Basic chemical manufacturing	1.6	1,976
Cluster	3256	Soap, cleaning compound, and toiletry mfg.	2.9	2,669
Cluster	3254	Pharmaceutical and medicine manufacturing	1.5	3,643
Cluster	4246	Chemical merchant wholesalers	1.2	1,381
Spot	3121	Beverage manufacturing	3.3	4,899
Cluster	3118	Bakeries and tortilla manufacturing	1.4	3,198
Spot	3111	Animal food manufacturing	3.7	1,587
Cluster	5171	Wired telecommunications carriers	1.8	10,007
Cluster	5182	Data processing and related services	2.4	5,589
Spot	3334	HVAC and commercial refrigeration equipment	3.2	4,164
Cluster	3335	Metalworking machinery manufacturing	1.8	3,006
Cluster	3333	Commercial and service industry machinery	1.9	1,762
Cluster	3315	Foundries	1.3	1,747
Spot	3364	Aerospace product and parts manufacturing	3.4	14,024
Cluster	3231	Printing and related support activities	1.4	7,563
Spot	7132	Gambling industries	3.7	4,453





## St. Louis Region Cluster Chart







## Research and Development

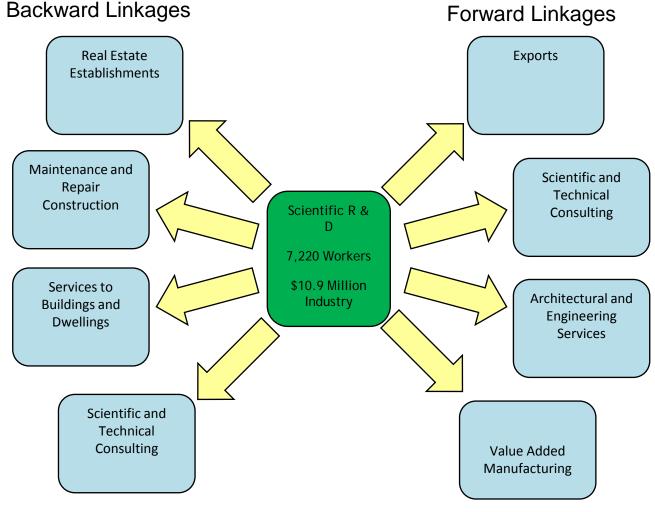
- Scientific Research and Development is involved in research of engineering, biotechnology, agriculture, and social sciences.
- Average wage is \$119,473
- Value-added per worker is \$85,302.

Scientific Research & Development Impact: Addition of 100 employees							
	Direct Impact Indirect Impact Total Impact						
Employment	100	128.6	228.6				
Labor Income*	\$11.9M	\$5.2M	\$17.1M				
Gross Domestic Product	\$10.9M	\$8.6M	\$19.5M				





## Research and Development Linkages







## Questions?







## Reports and Resources for Regional Analysis





#### Northeast WIA Region Demographic Summary

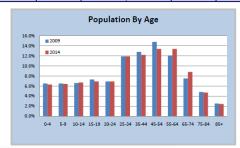
Demographic Trends The Northeast region of Missouri has a combination of large cities and rural area that help spur continual growth that matches the national average in almost every category. Like many rural regions in Missouri, the population is expected to grow older over the next five years as compared to more urban areas. For comparisons with state and national figures, please see the Missouri Demographic Summary.



AO-DS-NE-Region 2009

#### Population Trends

Population Category	2009 Data	Percentage	2014 Data	Percentage	2009 – 2014 Change
Total Pop.	267,414	-	280,546	-	4.7%
Median Age	38.5	-	38.9	-	1.0%
Total (18+)	203,769	76.2%	214,618	76.5%	5.1%
Total (65+)	39,577	14.8%	44,607	15.9%	11.3%
Male	133,172	49.8%	139,992	49.9%	4.9%
Female	134,242	50.2%	140,554	50.1%	4.5%



Income and Household Data

2009 Data

	2009 Data	2014 Data	2009 - 2014 Change
Total Households	102,236	107,288	4.7%
Per Capita Income	\$20,276	\$21,046	3.7%
Average HH Income	\$51,519	\$53,397	3.5%

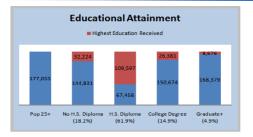
Ethnicity Trends centage 2014 Data

> 10,380 4,489%

Percentage

#### Education

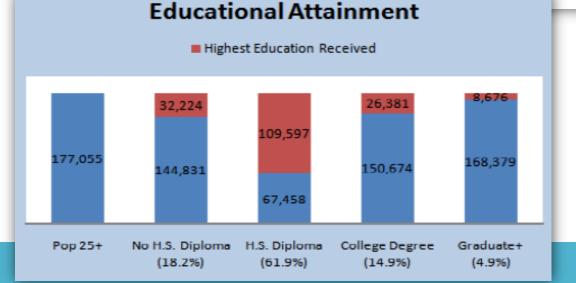
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Source: ESRI Business Analyst Demographic and Income Forecast

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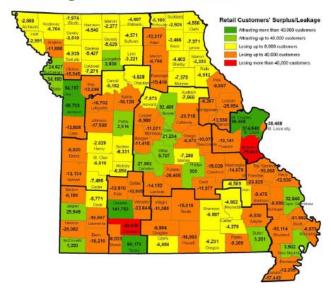




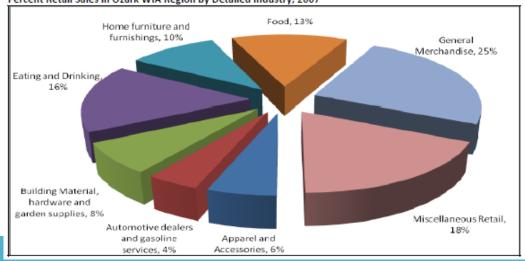


## **Retail Trade Analysis**

#### Commuting Patterns of Retail Customers



Percent Retail Sales in Ozark WIA Region by Detailed Industry, 2007





Ozark Workforce Investment Area RETAIL TRADE ANALYSIS

#### Retail Pull Factors

Retail trade is the sale and distribution of merchandise to consumers through either a store location or non-store location such as internet, phone, catalog or advertising.

Retail trade is one of the key economic indicators of regional economies. The retail strength of a county is a function of customer base served, the buying power of the customer base and quality of the retail environment. Retail pull factor measures the retail sales captured by a county across Missouri.

In 2007, two counties in the Ozark Workforce Investment Area had a retail trade pull factor greater than 1 indicating either a gain in customers from other counties or that residents spent more than the state average. On the contrary, five counties had a pull factor below 1 indicating residents either spent less than their state counterparts or residents purchased more goods outside their county.

Retail Industry Facts

Retail Trade Sectors

- Apparel and Accessories
- Automotive dealers
- Gasoline service stations
- Building materials,
- Hardware and garden supplies
- Eating and Drinking Places
- Home furniture and
- furnishings
- Food
   General Merchandise
- Miscellaneous retail

2007 Retail Trade Pull Factor



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JANUARY 20



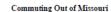
## Commuting Patterns

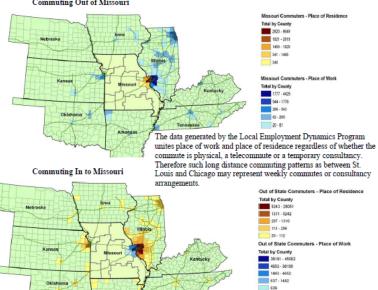


#### Cross-State-Line Commuting from the St. Louis Metro Area

This report highlights cross-state commuting patterns for the St. Louis Metropolitan area that includes St. Louis City, St. Louis County, St. Charles County and the Jefferson Franklin County Consortium Workforce Investment Areas (WIAs) in Missouri. Specifically, this analysis focuses on non-Missouri residents coming to the St. Louis Metro area to find employment, and St. Louis Metro area residents leaving to work out-of-state.

#### St. Louis Metro Area Commuting Patterns



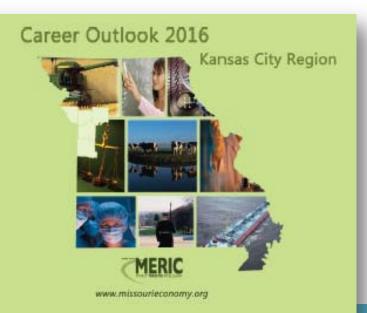




Analysis of the commuting maps shows the strong connection across the St. Louis Metropolitan area that justifies its analysis as a single unit. There is also a strong connection between the St. Louis Metro area and Chicago, Illinois and Kansas City. Kansas.



## Regional Employment Outlook



#### Kansas City Region TOP 50

Consers in the Kenses City Bogion with the most job egonings between 2006-2016. For a complete listing of competition, wages, and skills information, visit the MEEC website of

Occupation little	Total Openings	Average Areasi Noge	Education Experience Typically Required	Grade	Ma AN	dike t D	nya Same
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#### **Economic Indicators**

**Regional Overview** 

**Local Area Unemployment Statistics** 

**Population** 



## **Applications**

**Career Exploration Tool** 

**Employer Locator** 



#### **Public Online Resources**

#### U.S. Census Bureau

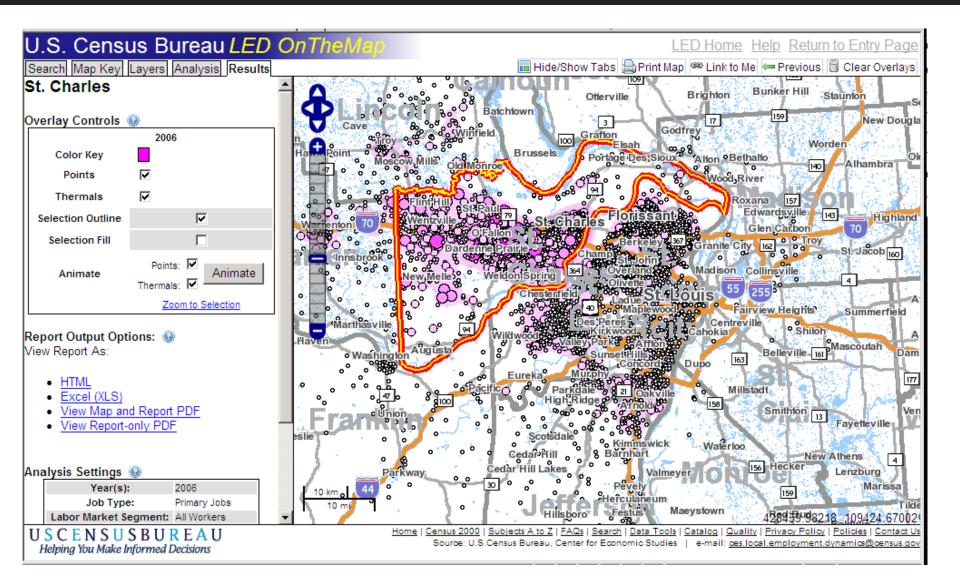
<u>American Community Survey</u> <u>Local Employment Dynamics (LED)</u>

## U.S. Bureau of Economic Analysis

<u>Income</u> Gross Domestic Product

### U.S. Bureau of Labor Statistics







## **Questions?**

# Tony Brite Sreedhar Upendram Veronica Gielazauskas

